

SUMMER ROBIN ROOSTS.

BY WILLIAM BREWSTER.

PERHAPS the greatest charm of ornithology is that its pursuit yields surprises when they are least expected. Especially true is this of the study of birds' habits, for a close watch kept on even the commoner species is sure, sooner or later, to reveal facts not in the books. Nor is this strange, for a lifetime is not long enough for fathoming all the secrets of the woods and fields immediately about one's home, while the general subject is inexhaustible. Moreover, a discovery which comes early and easily to one may long elude others equally vigilant. Yet who would suspect that at this late day, there could be an unwritten page in the life history of our Robin (*Merula migratoria*), a species of unusually general distribution, abundant nearly everywhere, and probably familiar to a larger number of people than any other bird on this continent? Nevertheless no author whom I have consulted so much as mentions the fact that Robins, while still in their summer haunts, form roosts* which are resorted to regularly night after night and season after season by hundreds or even thousands. Such gatherings, however, are by no means uncommon in Massachusetts, and they doubtless occur throughout the entire North, wherever Robins abound.

Possibly they have been neglected rather than overlooked. In either case I hope to show that they are not without interest and importance. What I have to say of them proceeds chiefly from personal experience, but I have also drawn freely from the notes of Messrs. Faxon, Batchelder and Torrey†, to all of whom I am indebted for much valuable aid in the preparation of this paper.

Our Massachusetts Robin roosts are invariably in low-lying woods which are usually swampy and are composed of such de-

*It has been known for some time of course, that Robins form large roosts while in their winter quarters in the South, but no very exact or precise information concerning these roosts seems to have been thus far recorded.

†Mr. Torrey has written an article on this subject for the October issue of the 'Atlantic Monthly.' It will relate, I understand, chiefly to a roost at Melrose Highlands which he has studied closely.

ciduous trees as maples, oaks, chestnuts, and birches, sometimes mixed with white pines. I have never known Robins actually to spend the night, however, in the latter, or indeed in any species of evergreen, except at Falmouth, Mass., where there has been a small gathering, these past two seasons, in a white cedar swamp. The trees in the roost may be tall and old with spreading tops, or crowded saplings only twenty to thirty feet in height, but it is essential that they furnish a dense canopy of foliage of sufficient extent to accomodate the birds which assemble there. As a rule, the woods are remote from buildings, and surrounded by open fields or meadows, but the latter may be hemmed in closely by houses, as is the case with a roost which at present exists in the very heart of Cambridge. A roost once established is resorted to nightly, not only during an entire season, but for many successive seasons. Nevertheless it is sometimes abandoned either with or without obvious cause, as the following account of the movements of the Cambridge Robins during the past twenty odd years will show.

I first found them roosting in the summer of 1867 in a tract of some ten or twelve acres of swampy woods situated about two hundred yards to the north and east of Fresh Pond and known to Cambridge collectors as the 'Maple Swamp.' The birds which came to this swamp approached it chiefly from the direction of Cambridge, the main body of the flight entering on the south and east sides. Probably it accommodated *all* the Robins which at the time bred in or very near Cambridge, for from every part of that city the flights led straight towards it. It also received some contributions from the country to the north and west, but these were comparatively trifling.

Either in 1873 or 1874 the Cambridge Robins deserted the Maple Swamp and found another roost in a similar piece of swampy woods on the opposite (northern) side of the Fresh Pond marshes, near the north bank of Little River not far from Spy Pond, and just within the borders of Arlington. The cause of this desertion was somewhat obscure, for the place which they left had undergone no sudden or marked alteration, nor had they been molested there to any considerable extent, while the change added nearly a mile to the length of their morning and evening flights, the course of which lay directly over the former roost where the passing birds would sometimes alight for

a moment as if to renew old associations. The new roost was many times more populous than the old, for it drew, in addition to the whole Cambridge contingent, a great number of birds from neighboring portions of Arlington and Belmont. In short, Robins poured into it nightly by thousands, and about equally on all sides. It was resorted to regularly until 1876 when the woods were cut down.

Neither note-book nor memory throws any light on where the Cambridge Robins roosted during the next five seasons. I was away from home much of the time, and lost all track of their movements until the summer of 1881 when I observed them passing over my house in nearly the opposite direction to that which they had taken in former years. Their roost proved to be within a few hundred yards of the Cambridge Museum, in Norton's Woods where it has continued ever since. I have no doubt it was founded by the same Robins—or their descendants—which in earlier days frequented first the Maple Swamp and later the woods on Little River.

There are equally good reasons for believing that a roost in the valley of Beaver Brook on the dividing line between Belmont and Waltham was also formed by some of the scattered legions of the Little River roost from which it is a little less than three miles distant. I discovered this Beaver Brook roost Aug. 25, 1884, when it contained an imposing body of birds—"thousands," according to the notes I made at the time. It has been occupied regularly since 1884, and is at present the largest colony known to exist anywhere near Cambridge.

South of the Charles River, in Longwood, about two and one half miles from the Norton roost, I found a considerable colony on the evening of Aug. 26, 1884. Their rendezvous was of the usual character—dense, swampy woods of oak and red maple. I did not again visit this place until Aug. 22, 1890, when I found that all the trees in the swamp had been killed by inundation. Nevertheless the Robins had not deserted the woods, but in fully their former numbers were roosting in a cluster of tall red maples, white oaks and chestnuts which, standing on a knoll above the reach of the water, had escaped the fate of their fellows. The entire area covered by the living trees was not over one quarter of an acre.

To go somewhat outside of the immediate neighborhood of

Cambridge, there is—or was in 1886—a roost in birch and maple woods on the banks of the Assabet River at Concord, remarkable for the small number of birds—only about fifty—which assembled there nightly, and a large colony at Melrose Highlands, discovered by Mr. Torrey in the summer of 1889. There are doubtless still others of which I have no knowledge scattered through this region.

Thus far I have spoken in only general terms of the number of Robins which sometimes congregate at these summer roosts. Several of my friends have attempted to count them, taking the best available stations outside the roosts and noting each bird as it flew in. This appears to be the only practicable method, for nothing whatever can be done inside the wood; but under the most favorable conditions it falls far short of absolute accuracy, especially at the larger roosts into which, at the height of the flight, the birds pour in such swarms that eye, brain and pencil are alike unequal to the task of noting all that pass in open view, to say nothing of the many that steal by close to the ground, under cover of bushes or the gathering darkness. Nevertheless any count carefully and conscientiously made, has this obvious value—it is sure to be well within the truth.

At the Beaver Brook roost Mr. Faxon with the help of an assistant counted 1883 incoming birds on the evening of Sept. 2, 1889. His next largest count, made without help Aug. 28 of the same year, was 1180. At Melrose Highlands Mr. Torrey, unaided, counted 1267, July 29, 1889, and 1517 on the same date in 1890. On July 28, 1890, with an assistant, he counted 2314. In both cases the assistant stood near his principal and was employed merely to divide the labor, no more ground being covered than on the other occasions.

On their face these figures indicate of course that the roost at Melrose Highlands is larger than that on Beaver Brook. But Mr. Torrey tells me that practically all his birds approach the woods from the same side, whereas, as Mr. Faxon and I have both observed, the Beaver Brook birds enter their roost in about equal numbers from every side. Before the two colonies can be fairly compared, therefore, it is evident that Mr. Faxon's count must be multiplied by four at least, if not, as he himself believes, by five. Any additions which should be made for birds that passed the observers uncounted would probably be so nearly equal in both

cases as not to affect the comparison, although doubtless they would swell both totals materially. The figures as they stand, however, are sufficiently impressive.

I made no counts at the Maple Swamp roost, but as I remember it, it never contained more than about 2000 birds. Its successor at Little River was not only very much larger, but if my notes and memory can be trusted, was by far the largest gathering that has ever fallen under my observation. Thus I find that on the evening of Aug. 4, 1875, I estimated the Robins which came in on two sides only at 25,000. This estimate was not mere guess work but was based on a count of the birds which passed during an average minute, multiplied by the number of minutes occupied by the passage of the bulk of the flight. Such a method, of course, is far from exact, and it very probably gave exaggerated results, but a deduction of fifty per cent would surely eliminate all possible exaggeration. As the birds were coming in quite as numerously on the two sides opposite to those where my estimate was made, it follows that the total, after making the above deduction, was still 25,000, and this I feel sure was far below the actual number.

The Norton roost is comparatively small, although, according to some careful counts made this season by Mr. Batchelder, it occasionally reaches an aggregate of about 1500 birds. The Longwood roost at the time of my last visit contained certainly 1000 and probably 1500 Robins.

During the past season Mr. Faxon saw a few Robins going to the Beaver Brook roost as early as June 11, but I have never observed any well-marked flights at Cambridge before the 20th of that month. The time probably depends somewhat on the date at which the first broods of young are strong enough to make the necessary effort, for the earlier gatherings are composed chiefly of young birds still in spotted plumage. Perhaps not all of those able to undertake the journey actually perform it at this period, for the movement, at its inception, is slight, and it gains momentum slowly. After July 1 it increases more rapidly, and by the middle of July becomes widespread and general, although it does not usually reach its height until the latter part of that month or early in August. By this time the old birds have brought out their second broods, and old and young of both sexes and all ages and conditions join the general throng. In fact it is

nearly certain that during August practically *all* our Robins visit some roost nightly.

It is by no means equally clear that individual birds or flocks go always to the *same* roost. If this were so the number at any given roost should remain uniform for a time after it has reached its maximum and before the migration begins. But it not only varies from week to week, but from night to night. Thus at the Norton roost, where, owing to the small size of the colony and to the fact that most of its members enter at one side over a wide opening, it is possible to count the birds with close approach to accuracy, Mr. Batchelder noted 861 on July 23, and on the next evening 1062, an increase of about 23 per cent! On the evening of Aug. 15 following, standing at precisely the same point, I counted only 518; on that of Sept. 4, 1251. Mr. Faxon's counts at Belmont and Mr. Torrey's at Melrose Highlands show similar variations. As already stated, Mr. Faxon's largest count was made Sept. 2, 1889, the next largest Aug. 28 of the same year. The Melrose roost, during the last two seasons, was apparently most populous in the latter part of July. More observations are perhaps necessary before the cause of these fluctuations can be definitely ascertained; but as Robins, when not tied down by family cares, are addicted to wandering more or less widely in pursuit of food or recreation, it seems more than likely that during August and early September they sometimes pass outside the limits of the region—often, be it remembered, only a few miles in extent—tributary to their chosen roosts. If this is true,—and it can scarcely be doubted—what more natural than that they should join at nightfall the general exodus from the surrounding fields and woods, even though it leads in a direction contrary to that which they have been accustomed to take? In support of this assumption is the fact that, as far as I have seen, the evening flights over any given place are invariably in one direction, that is there are never two sets of Robins passing in different directions at the same time, as would be the case were such rovers to return at evening straight to their own roosts. This theory, it will be observed, is only necessary to account for the acquisition of the habit by the young, for after it has become established a knowledge of the existence and position of several roosts would certainly be taken advantage of more or less frequently. Another factor which possibly has some influence on

the fluctuations under consideration is the Robin population of the country along the boundaries between two contiguous roosting areas. Why may not this constitute a neutral ground, its inhabitants sometimes visiting one roost, sometimes the other, as fancy or the conditions of wind and weather dictate? This suggestion, however, is pure speculation unsupported by any data.*

After the middle of September the roosting flights diminish rapidly, and by the end of the first week in October the roosts are practically deserted. The latest date in my possession at which any Robins have been actually found in a roost is Oct. 20, 1889, when Mr. Faxon noticed a few still lingering at Beaver Brook, but my notes record that on Nov. 6, 1888, I saw a succession of flocks flying, at sunset, into these Beaver Brook woods which, at the time, were "leafless"! About 200 Robins were seen on this occasion. They were in unusually large flocks, one, which passed me closely, containing fully 100 birds. If, as seems probable, they were migrants from further north it is interesting that they should have found their way to this roost; but perhaps enough local birds were with or near them to serve as guides. Mr. Faxon believes that our roosts receive some accessions from the north as early as September.

I had supposed that the old birds which accompany the young in the earlier flights to the roosts are individuals of both sexes that for one reason or another have not attempted to rear second broods. But Mr. Faxon informs me that as far as he has seen they are invariably males, and in disproof of the rest of my assumption furnishes the following interesting bit of evidence. The observations quoted were made in July, 1890, a little over a mile from the Beaver Brook roost.

* Since the above was written, I have definitely ascertained that over a belt of country a mile or more in width lying about midway between the Beaver Brook and Norton roosts the flight is directed sometimes to the former, sometimes to the latter roost. On the evening of Sept. 6, 1890, the Beaver Brook roost drew not only the entire Robin population from this neutral ground but also all the birds of an adjoining area which extended to within half a mile of, and had been before tributary to, the Norton roost. A profusion of ripe rum cherries had attracted to this area an unusual number of Robins. Probably the greater part of these belonged to the Beaver Brook colony and the less numerous local birds followed their lead on the return flight that evening. At least I can think of no other explanation of the phenomenon — which was repeated on the evening of Sept. 11. These observations throw much light on the questions above raised and in the main appear to support the theories which I have just advanced.

“The numbers of adult males *in song*, and the lack of females shown whenever I scrutinized the individual birds on their way to the roost—together with the fact that the Robins hereabouts seemed to be generally engaged at that time in rearing new broods—led me to doubt your theory and to attempt observations that would throw some light on the subject. It happened that on the 22d of July there were two Robin's nests on the place, one with three young, well advanced, and one with three eggs (female sitting). I had noticed several times that the male belonging to nest No. 1 carried food to his young late in the afternoon, while the flight to the roost was going on. On the day above-named, therefore, I began watching him closely toward evening, and saw him—after feeding the young—fly straight off for the roost, $1\frac{1}{4}$ miles away, at 7.30 P.M. You remember I have an unobstructed view from the house to the north and northwest, so the bird's course could be readily followed till he disappeared over the ‘Granite Ledge.’ On his departure the female came and took possession of the nest for the night. I saw her brooding the young until it became so dark that I could distinguish nothing, even at near range with opera-glasses. On the following evening the male again fed the young at about the same hour, then flew to the top of a spruce tree, and, after singing a good-night to his wife and babies, took a direct flight for the roost. The female then fed the young and settled in the nest. This was all repeated again on the 24th. While this was going on female No. 2 was sitting closely and I saw nothing of her mate, although the young hatched out on or before the 30th. The young in nest No. 1 left it on the 26th. This male has been on the place all summer, and by long familiarity we have come to distinguish him readily by a peculiar high note in his song. On the morning of the 24th I was awake from three to four o'clock, and our model husband and father returned to his family at 3.40 (sunrise 4.29), his arrival being announced by his glad call and morning song. On the morning of the 26th (which was cloudy) his salute was not heard from the favorite tree till four o'clock. He was singing pretty freely, even through the day, up to the time the young left the nest. Since then, although the whole family has remained about the nest up to this time, he has been almost silent (at least so far as singing is concerned), like the rest of his tribe at the present time.

“Now, although these observations were all made on one family of Robins, I have no doubt that they show, when taken in connection with the other facts, that the early flights to the roost are composed of the first brood young *together with the old males*. The later augmentation of the roost will come from the younger broods plus the females. What possibilities are suggested—if this be so—through the persistence of mutual relations between the old males and their offspring! The old birds must guide the young birds to the old roosting ground, and who shall say that this hegemony of the roost may not continue in a greater or less degree throughout the season? I do not mean to imply that each parent takes his own offspring in tow—but the nightly re-union of old and young *en masse* cannot but be an education for the youngsters. It was a revelation to me to find the male Robins taking care of their younger broods and wives by day, and going off nightly to sleep with their elder children!”

Most of the roosts which I have visited are resorted to by other birds besides Robins. The Little River colony always included some Bronzed Grackles and Cow Buntings, the former, to the number of a thousand or more, coming in all together in a single flock, or in two or three flocks closely following one another, the latter, perhaps half as numerous, arriving in a succession of flocks containing from twenty to thirty birds each. There were Swallows, also, in varying numbers. All these species alighted with the Robins and, as nearly as I could ascertain, passed the night among them. At the Falmouth roost there are quite as many Grackles as Robins (about two hundred of each), and the two species certainly roost together in the densest part of the cedars, although the Grackles arrive in one great flock, whereas the Robins drop in singly or in small parties after their usual fashion. There are also a good many Cowbirds besides a fair number of Red-winged Blackbirds and a few Kingbirds. The Cowbirds come in small flocks, and at first alight in the cedars, but soon fly down to, and doubtless pass the night in, some dense thickets of pepper-bush (*Clethra alnifolia*) which form a fringe around the edges of the swamp. The Norton roost accommodates a few Grackles and some Orioles (*I. galbula*). On one occasion I saw fully fifty of the latter settling themselves for the night in the undergrowth nearly beneath the oaks where the Robins congregate. At the Longwood roost there are Orioles,

but no Blackbirds of any species. A few Cedarbirds are also found in or near most of the roosts, and at Beaver Brook Mr. Faxon has seen Brown Thrashers.

Having dealt with what may be termed the statistics of my subject, it remains to give some description of these flights and the behavior of the birds at the roost. There is nothing about the start which would attract particular attention, but a close observer will notice that, as evening draws near, such Robins as may have been scattered about on the lawns or in the orchards near his position begin to show marked restlessness, ascending to the tops of the taller trees, calling a good deal — an old male perhaps singing. At length they take wing, one after another in quick succession, each, as it flies, uttering a loud note, and in straggling order disappear over the trees. The approach of another flock seems to excite them and hasten their departure, and they often follow it at once, all dashing off together as if struck by a panic, but I have never seen two flocks unite, although single birds occasionally join a larger number. Their course towards the roost is usually straight, but they sometimes turn aside to avoid a hill or follow the valley of a brook or river. As 'all roads lead to Rome,' so the various Robin paths traced across the sky at sunset converge more or less regularly from every side to their common centre, the roost. At roosts where for one or another reason most of the birds enter on a single side only and are drawn to something like a focus, they form, during the height of the rush, an apparently continuous stream. But close examination will show that the flight is always more or less intermittent and composed of single Robins and loose, straggling parties of from three or four to eighteen or twenty birds, each single bird or flock moving quite independently of all the rest.

Some—probably birds from the greatest distances—are a thousand feet or more above the earth, flying slowly apparently, with whirring, often intermittent, wing-beats, until almost over the roost when, perhaps after circling once or twice, they half close their wings and drop like meteors, or descend in graceful curves or spirals. Others, at lower elevations, seem to advance more rapidly and steadily, and upon nearing the roost glide down on gentler inclines. While still others skim close over the turf with arrowy swiftness, swerving now to this side, now to that, to avoid bushes or other obstacles, and turning sharply upward into

the treetops just as they gain the woods. The average height of flight is a little above the trees, but it varies at different periods of the same evening as well as on different evenings. As a rule the birds come lower and lower as the twilight deepens. They seem to fly lowest—as might be expected—on cloudy and especially rainy nights, but highest—as certainly would not be supposed—on cloudless nights *when the air is filled with dense haze*. On a particularly hazy evening (Aug. 31, 1889) the flights passing over Mr. Faxon's house were so high that "many birds were just discernible." As only 450 were counted against 835 of the preceding evening, Mr. Faxon concludes "that one half of them were beyond my ken." The presence or absence of wind may have more to do with this matter than the conditions just mentioned, for all the especially high flights that I have witnessed have occurred during nearly or perfectly still weather.

A good many birds approach the roost by short, interrupted flights, lingering on the way in isolated trees or groves where they often sing for a minute or two. At the Longwood roost more than two thirds of the entire colony arrive in this manner, probably because the swamp is in the bottom of a deep hollow surrounded by hills crowned with woods or orchards which afford convenient places for alighting.

The first comers reach the roost an hour or more before sunset, but for the next thirty or forty minutes the arrivals are few in number and at wide intervals although they gradually increase. There is rarely anything like a continuous or heavy flight until within fifteen or twenty minutes of sunset, but rather more than half the total number usually pass in before the sun has dipped below the horizon.

For about fifteen minutes after sunset the rush continues unabated. It then begins to slacken, always diminishing more rapidly than it grew, and often ending with somewhat marked abruptness. Stragglers, however, continue to arrive until it is too dark to see them distinctly except against the light in the western sky.

The earlier comers usually alight on the topmost twigs of the taller trees and sometimes, after a brief rest, fly back to the fields to feed, as if conscious that they were ahead of time. If there is a brook or spring near at hand many birds visit it to drink or bathe. They are also fond of collecting in the upper branches of

dead trees to bask in the last rays of the sinking sun, and a ruin cherry tree loaded with ripe fruit is an irresistible attraction. But when the rush is at its height, there is rarely any loitering. Each bird, as it gains the woods, plunges into them at once, and with such directness and decision that one feels sure it has gone straight to its own particular perch. This, however, is evidently not the case, for during the entire period covered by the bulk of the flight, indeed for some time after the last belated straggler has stolen in, there is incessant and general agitation of the foliage as if a strong wind were blowing through the trees. This is caused by the movements of innumerable birds who, in the attempt to secure positions nearer the centre of the roost, or in thicker foliage, are continually darting from place to place, often plunging headlong into the branches or dropping through the leaves with much awkward and noisy fluttering. Either because of inability to see distinctly in the dim light, or with deliberate design to dispossess their fellows, such restless spirits often try to appropriate perches already occupied, and the squabbles which ensue, although quickly ended by one or the other giving way, are accompanied by outcries which rise above the general din of shrill, varied voices. If it is early in the season there is also more or less singing.

But the most characteristic and peculiar sound to be heard in a roost is that produced by the myriad wings constantly striking the leaves. This closely resembles the patter of hail or large rain drops on dry foliage at the beginning of a shower. There is also an equally steady and similar but slighter sound of falling excrement with which the ground and bushes beneath the roost are so thickly covered at times as to look as if sprinkled with snow flakes.* As the darkness deepens the tumult gradually subsides. One by one the shrill voices are hushed and the nervous flutterings cease, until, when the light has quite gone from the west and the stars are all out in the great dome overhead, a person might pause under the trees and listen intently for minutes without hearing anything save the occasional drowsy chirp or faint rustle of some half-awakened bird — sole tokens of the feathered host bivouacking in the leafy canopy above.

* Early in the season when the food of the Robin consists chiefly of earth worms and insects its excrement is of chalky whiteness. Later, when berries are eaten freely, the color becomes so dark that the deposits beneath the roost are no longer noticeable.

Mr. Batchelder visited the Norton colony before daybreak on the morning of July 8, 1890, to see the birds go out. His notes describe this experience in the following words:

"It was a warm morning, with a few thin clouds, and a moon at the third quarter in the meridian, at three A. M. when I reached the ground. There was hardly a trace of dawn in the east, but one or two Robins had begun singing. At 3.06 there was a chorus singing, so many birds that it was hard to distinguish any individual's song; it did not seem as if they sang with full power. At 3.16 I heard Robins singing in the trees on Divinity Avenue and probably, too, beyond the Museum. At 3.29 three birds left the roost. By this time there was so much daylight that the moon hardly cast any shadow. At 3.34 one more bird left; by 3.39, twenty had left; 3.41, thirty; 3.44, sixty; 3.46, ninety; 3.47, one hundred; 3.49 $\frac{1}{2}$, one hundred and fifty; 3.51 $\frac{1}{2}$, two hundred; 3.54, two hundred and fifty; 3.56 $\frac{1}{2}$, three hundred; 4.00, three hundred and forty; 4.02, three hundred and fifty; 4.05, three hundred and sixty; 4.14, three hundred and seventy-five; 4.16 three hundred and eighty; 4.19, three hundred and eighty-five. At 4.20 it was bright daylight. By this time light fleecy clouds covered thinly most of the sky, and a cool west wind had risen. The Robins, most of them, scattered gradually among the trees adjoining the roost before they finally flew off, and this together with the fact that when they left they usually flew low, diving down nearly to the ground at the beginning of the flight, made it difficult to count the departures; probably many got away without my seeing them in the dim twilight. A considerable portion of them stopped to feed in the ball-field before going away; sometimes one of these would fly up into the trees again before leaving. At 4.20 the roost was pretty nearly deserted, but for perhaps a hundred yards around Robins were to be seen in the woods, mostly feeding on the ground; I should think there must have been a hundred of them."

There is much about the flight to the roost which will remind the reader of migration. The preliminary restlessness and gathering of the scattered birds; the excitement caused by the passage of other flocks; the wide spread of the infection; and the brief time in which a considerable area is practically drained of its entire Robin population;—all these are familiar features to one who has studied the phenomena of migration. As with the

latter, the roosting flights are doubtless started by a few experienced birds who, with a definite purpose in view, lead the way over familiar ground to an old haunt. Others follow and the rout becomes general, although many of the birds which it includes are probably at first as ignorant as they are careless of whither they are going and to what end. A further resemblance to migration may be found in the manner in which the different sets of birds perform their journey—not all together nor yet quite independently of one another, but in what is virtually a straggling army where the new recruits are always more or less directly under the guidance of veteran leaders. In short, so closely do these evening flights resemble those of migration that I can trace only two marked distinctions: (1) They are comparatively local affairs extending at most over only a few square miles; (2) they are undertaken, not because of the necessity of escaping from a region where food will soon fail or the climate become unbearable, but seemingly from a mere impulse to assemble nightly in one place for mutual companionship and protection. Neither of these differences is really fundamental, nor can either affect the obvious significance of the fact, established by Mr. Faxon, that the young are at first led to the roost by their parents. If the guidance of old birds is necessary along the short and simple paths to the roosts, can it be doubted that it is even more essential on the long and difficult journey southward?

ON A COLLECTION OF BIRDS MADE DURING THE
WINTER OF 1889-90, BY CYRUS S. WINCH, IN
THE ISLANDS OF ST. THOMAS, TORTOLA,
ANEGADA, AND VIRGIN GORDA,
WEST INDIES.

BY CHARLES B. CORY.

ST. THOMAS.

Dafila bahamensis (Linn.).

Aythya affinis (Eyton).

Tyrannus dominicensis (Gmel.).